FOUNDATIONS FOR THE FUTURE

The Commonwealth Government’s commitment to health and medical research

2007–08 BUDGET
Dear fellow Australian,

A fundamental measure of a progressive society is its commitment to excellence in health and medical research. Australia has long boasted some of the best scientists, researchers and medical pioneers in the world. We are a nation of innovators.

Penicillin – discovered just before WWII – remains pivotal in the treatment of disease around the world today. Our own Howard Florey helped to realise this wonderful breakthrough and began a tradition of home-grown medical research of the highest calibre of which each and every Australian should be proud.

Since then, the successes of our researchers – both as individuals and organisations – have meant less disease, better treatment, improved quality of life and longer lifespans:

- in 1996, Professor Peter Doherty was awarded a Nobel Prize for Physiology or Medicine for his discovery on how the immune system recognises body cells that have become infected with viruses; and

- in 2005, Perth researchers Robin Warren and Barry Marshall won a Nobel Prize for their discovery of the bacterium Helicobacter pylori and its role in gastritis and peptic ulcer disease.

Investment in health and medical research is an investment in Australia’s future – and in our people.

Of course, Australia’s health profile today is vastly different from the days when Florey was supplying the new wonder drug to our troops. Where there was once tuberculosis, polio and diphtheria, there is now obesity, avian influenza and chronic disease associated with our ageing population.

Once again we will meet these challenges.

The Commonwealth Government has been a consistent supporter of health and medical research over the past decade. From 1995–96 through to 2009–10, there will be a five-fold increase in the Howard Government’s spending in this area.

Public investment in health and medical research is already at record levels.

The Budget delivers well over $400 million to enable clinical and research facilities to improve their capacity to undertake quality work into the causes, diagnosis and prevention of disease.

This is what our economically successful Government can do. This is what a progressive society does. This is what a good and decent society does.

Tony Abbott
World-leading medical research has led to improvements in ante-natal care and the birth of healthier babies.
Twenty years ago, if you were born deaf you lived your life in silence. Some babies just died in their sleep for no apparent reason. Cancer was a major cause of death and the death rate was growing. And you still thought your stomach ulcer was caused by stress.

Today, thanks to medical research, we live in a world where Cochlear implants give sound where there was silence. We now know about risk factors for Sudden Infant Death Syndrome (SIDS). We can vaccinate against the principal cause of cervical cancer. And a glass of bacteria-infested broth has taught us that this is what causes stomach ulcers.

These breakthroughs are Australian health and medical research at work. They sometimes take years to develop. And they do not come cheaply.

Recognising this, the Commonwealth Government has made the funding of medical research, and building the infrastructure capacity to support it, a priority.

From 1995–96 through to 2009–10, there will be a five-fold increase in the Commonwealth Government’s investment in health and medical research. Funding for medical research grants through the National Health and Medical Research Council will have increased to around $700 million a year by 2009–10.

In 1999–2000, in response to the Health and Medical Research Strategic Review (the Wills Review), the Government doubled research spending with a funding increase of $614 million over the next six years.

In 2003–04, recognising the importance of providing state-of-the-art facilities for researchers to continue their work, the Government funded the medical research infrastructure initiative:

- $5 million for the Garvan Institute
- $5 million for the Hunter Medical Research Institute
- $5 million for the Queensland Institute of Medical Research
- $5 million for the Westmead Millennium Institute
- $2.5 million for the Murdoch Childrens Research Institute
- $2 million for the Brain and Mind Research Institute
- $2 million for the Woolcock Institute of Medical Research
- $1.4 million for the Centenary Institute of Cancer Medicine and Cell Biology
- $1 million for the Howard Florey Institute
- $1 million for the Prince Henry’s Institute of Medical Research
- $1 million for the Walter and Eliza Hall Institute of Medical Research
- $125,000 for the National Ageing Research Institute
- $100,000 for the Children’s Cancer Institute Australia
- $100,000 for the Wesley Research Institute.

In 2004–05, the Government announced major investment of $200 million over seven years to help independent medical research institutes.

In 2005–06, the Government’s expenditure on health and research grants was $430 million, more than double that of 1999–2000.
Development of vaccines helps to prevent potentially fatal childhood disease.
In 2006, we provided a further $215 million for infrastructure for medical research facilities to support them to undertake capital works and build important medical research capacity.

- $50 million for the Walter and Eliza Hall Institute of Medical Research
- $37 million for the Howard Florey Institute
- $15 million for the Westmead Millennium Institute
- $14 million for the Garvan Institute and Victor Chang Cardiac Research Institute
- $10 million for the Baker Heart Research Institute
- $10 million for the Centenary Institute
- $10 million for the Children’s Cancer Institute Australia
- $10 million for the Macfarlane Burnet Institute for Medical Research and Public Health
- $10 million for the Murdoch Children’s Research Institute
- $10 million for the Olivia Newton-John Cancer Centre
- $10 million for the Queensland Brain Institute
- $6 million for the Sydney Melanoma Unit
- $5 million for the Gallipoli Research Foundation
- $5 million for the Hunter Medical Research Institute
- $5 million for the Woolcock Institute of Medical Research
- $4 million for the Marshall Centre for Infectious Diseases
- $2 million for the Brain and Mind Research Institute
- $2 million for the National Adult Stem Cell Research Centre.

In the 2006–07 Budget, the Government provided a $690 million boost to research grants, fellowships and specific research agendas. This included $500 million for research into new medical knowledge and technologies with the potential to prevent or treat disease and improve the lives of Australians.

The Government also provided a further $20 million towards establishing the National Adult Stem Cell Research Centre.

This ongoing commitment and support is producing real results. Australia punches above its weight in health and medical research. The biotechnology figures are a telling example. The Commonwealth Government has helped the biotechnology industry to grow by investing close to $1 billion in public biotechnology from 2002–03. The number of Australian biotech companies increased from 68 companies in 1992 to 370 in 2004.

Today, on a per capita basis, our research output is twice the OECD average. With 0.3 per cent of the world’s population, Australia produces about 2.5 per cent of the world’s health and medical research output. Australia is a world leader in health and medical research – and this Government is committed to ensuring it remains so.
Great research breakthroughs that translate into practice require dedication, perseverance and commitment.
Early 1990s  Professor Terry Dwyer, Professor Anne-Louise Ponsonby and a team from the Menzies Research Institute, University of Tasmania, begin to link SIDS with sleeping position.

1996  Professor Peter Doherty is awarded a Nobel Prize for Physiology or Medicine for research into immunology.

1996  Work by Peter Coleman, Jose Varghese and Mark von Itzstein, building on early research by Dr Graeme Laver at the Australian National University, leads to the development of the world’s first anti-influenza drug Relenza.

1998  Australian Professor Alan Trounson, along with a US team, isolates human embryonic stem cells for the first time.

2001  A world-first technique for ‘grow-your-own’ arteries for heart bypass is developed by University of Queensland researchers.

2002  Perth plastic surgeon, Dr Fiona Wood, helps Bali bombing victims through her work in accelerating healing of burns victims through synthetic ‘spray on’ skin.

2004  Professor Ian Frazer’s clinical trial for a cervical cancer vaccine is a success.

2005  Perth researchers Robin Warren and Barry Marshall win a Nobel Prize for Physiology or Medicine for discovering bacterium treatable by antibiotics is the cause of most gastritis and stomach ulcers.

2006  Gardasil, Professor Ian Frazer’s vaccine to prevent cervical cancer, becomes available for women in Australia and around the world.
Funding for health and medical research creates jobs, as well as health benefits for all Australians.
The Commonwealth Government is providing an additional $485.8 million in grants to leading Australian health and medical research facilities to help them build greater capacity to undertake research into the causes, diagnosis and treatment of disease.

- $100 million for the Princess Alexandra Hospital and University of Queensland
- $100 million for the Western Australian Institutes for Health
- $55 million for the Queensland Institute of Medical Research
- $50 million for the Murdoch Childrens Research Institute
- $50 million for the Australian Synchrotron
- $30 million for the Prince of Wales Medical Research Institute
- $19.5 million for the Institute for Immunology and Infectious Diseases at Murdoch University
- $15 million for the Westmead Millennium Institute
- $15 million for the Australian Regenerative Medicine Institute
- $14 million for the Baker Heart Research Institute
- $10 million for the Sydney Cancer Centre
- $10 million for the Flinders Centre for Innovation in Cancer
- $6 million for the Macfarlane Burnet Institute for Medical Research and Public Health
- $6 million for the Brain and Mind Research Institute
- $5.3 million for the Menzies School of Health Research
All Australians deserve a healthy start to life. Research on childhood development shows that healthy lives begin before birth.
WHAT WE’RE DOING NOW

This funding continues the Commonwealth Government’s commitment to build a health and medical research capacity that will ensure that we remain a world leader in this vital area. It recognises that health and medical research infrastructure is central to Australia’s ability to deliver high quality health care both now and into the future.

**Princess Alexandra Hospital and University of Queensland**

$100 million will be used to support the establishment of the southern hemisphere’s first integrated research and development facility for the development, testing and small scale production of life-saving biopharmaceuticals.

Biopharmaceuticals include vaccines such as Gardasil, used to prevent cervical cancer in women, cancer and other disease treatments such as chemotherapy and a range of prescription medications to enhance people’s quality of life.

In the past, development and production of these important drugs occurred overseas due to a lack of local resources. That meant that the insights, research capabilities and financial benefits gained through such endeavours were lost to offshore markets.

This significant funding injection will help to establish a home-grown facility utilising local resources, skills, technologies and scientific talent to generate Australian health discoveries within Australia and to retain the associated benefits within this country.

**Western Australian Institutes for Health**

$100 million will support the construction of two new innovative research facilities at the new Fiona Stanley Hospital and Queen Elizabeth II Medical Centre in Perth. The funding will also help to transfer the Telethon Institute for Child Health Research to the same location.

This will centralise these state-of-the-art research hubs, to create an international research environment housing top quality researchers and cutting-edge infrastructure.

The newly-created hub will span biomedical, clinical, preventative health and health services research, resulting in more effective health services. This will be vital in researching and developing treatments in critical areas such as genetic causes of adult disease (including cancer, nerve and muscle disease), child health, eye disease, asthma and allergies, sleep disorders, melanoma research, diabetes and cardiovascular disease. By the end of the decade, it is proposed that up to 2,000 researchers will be housed in the one environment.
Research using brain imaging techniques is identifying early signs of mental illness, including depression and schizophrenia.
Queensland Institute of Medical Research

$55 million will support the building and fitout of a new 13-storey medical research facility.

This funding will enable the Institute to expand into new research disciplines including mental health disorders such as schizophrenia and bi-polar disease, tropical disease, vaccine development and biosecurity.

The new facility will increase the Institute’s research staff by more than 60 per cent. This will allow it to take the next vital step in its growth by expanding into new areas of medical research which are a priority to Australia.

Murdoch Childrens Research Institute

$50 million will help establish a new world-class facility at the redeveloped Royal Children’s Hospital in Melbourne to research serious childhood disease and conditions.

This facility will allow for continued advances into areas which seriously affect our children’s wellbeing, including research into premature births, cerebral palsy, hearing problems, mental health and rotavirus.

Some of the Institute’s recent achievements include the use of gait analysis technology to help improve mobility for children with cerebral palsy, the development of software for teenagers’ mobile phones to monitor responses to stress and for insights into the beginning of depression, and the discovery of the enzyme responsible for arthritis, which has made international headlines.

Australian Synchrotron

$50 million will contribute to the operating expenses of the Australian Synchrotron over its first five years of operation. This one-off payment represents around half the total operating costs of this major new facility, which will help keep Australia at the forefront of world-class research.

Synchrotrons are large instruments that utilise fast-travelling electrons to create extremely bright light which is used to probe the nature and behaviour of materials. Synchrotrons allowed Australian scientists to probe the characteristics of the influenza virus and provided insights that led to the development of a new anti-flu treatment.

Prince of Wales Medical Research Institute

$30 million will support the development of a new purpose-built facility at the Prince of Wales Medical Research Institute in Sydney to enable it to provide the leadership in establishing a world-class Neuroscience Research Precinct.

The funding will enable the construction of laboratories which specialise in research into neurological and neurodegenerative diseases such as Alzheimer’s and Parkinson’s, the effect of falls on the elderly, as well as psychiatric illness and psychological disorders.

The Institute has a strong track record in the identification and development of important advances in brain-related disease.

“A report from Access Economics states from every $1 invested with medical research, $5 is returned to the Australian economy.”

TONY ABBOTT, MINISTER FOR HEALTH AND AGEING, 1 SEPTEMBER 2006
Research into the body’s immune system is leading to real progress in tackling diseases such as HIV and cancer.
Institute for Immunology and Infectious Diseases at Murdoch University
$19.5 million will fund the construction and fitout of a dedicated building to house a new Institute for Immunology and Infectious Diseases at Murdoch University in Perth.

This will enable ground-breaking research into hepatitis and HIV to continue, including work on a HIV vaccine, and will ensure that specialist capability remains in Australia.

The Institute will combine the talents of clinicians, biostatisticians, computer scientists, laboratory scientists and researchers. They will look to extend their current expertise and knowledge to cover a broader range of infectious diseases and human genetics.

Some of the Institute’s recent work includes the discovery of a genetic test that predicts a life-threatening allergic reaction to the HIV drug abacavir, one of the first examples of personalised medicine to be implemented globally, and the identification of a link between anti-HIV drugs and fat-wasting disease.

Westmead Millennium Institute
$15 million will be used to support the consolidation of the Westmead Millennium Institute’s medical research hub through the construction of a new research building which will house and combine the skills of more than 700 scientists under one roof.

The new research facility will boost the Institute’s contribution to the discovery of treatments for a number of life-threatening diseases. The Institute’s research program spans cancer and leukaemia, infectious and immune diseases, mental illness and liver, kidney, eye, heart and respiratory disease, using the basic tools of molecular and cell biology, genetics and epidemiology, imaging technology and clinical research. This funding will provide valuable infrastructure capacity to enable this research to continue.

Australian Regenerative Medicine Institute
$15 million will contribute to the establishment of a new Australian Regenerative Medicine Institute at Monash University in Melbourne. The Institute will bring together expertise in stem cell and biomedical science and bioengineering and provide world-class training for young scientists in the field of regenerative medicine through the Future Scientific Leaders Program.

The Institute will seek to develop effective treatments for incurable diseases at all ages, but particularly those on the rise as a result of our ageing population. It will examine ways to promote healthy ageing and reduce the burden of disease.

Regenerative medicine enables the restoration of damaged tissue and organs by injecting or implanting cells to allow the human body to heal and recover. This will be applied to diseases that are more prevalent as we age, such as cancer, arthritis and other musculoskeletal conditions, diabetes and cardiovascular diseases. The work will span research and development, through to practical treatments in clinical settings.

“These are projects which can make a huge difference to our quality of life, today as well as tomorrow. Our commitment to this vital area will continue.”

JOHN HOWARD, PRIME MINISTER, 21 MAY 2006
Australia is at the forefront of cancer research, with our researchers responsible for revolutionary breakthroughs in prevention and treatment.
Baker Heart Research Institute
$14 million will enable the Baker Heart Research Institute and the International Diabetes Institute to work together to address obesity and its related diseases in the population.

These eminent organisations will collaborate using their strong scientific and research bases to identify solutions to the consequences of obesity, which include growing rates of cardiovascular disease and diabetes.

A major aim is to develop strategies and teaching tools for children through studies into physical activity and metabolism. There will also be a specific focus on preventing disease in Indigenous communities. This funding will also enable the establishment of a new vascular research centre in Alice Springs.

Sydney Cancer Centre
$10 million will support further development of a world-class comprehensive cancer centre at Royal Prince Alfred Hospital in Sydney. The funding will assist in providing specialist clinical research and services on the hospital campus and will help make the centre a hub of excellence in cancer care.

In addition to the Sydney Cancer Centre, there are a number of cancer centres around Australia that provide comprehensive cancer care and research facilities, including the Peter MacCallum Cancer Centre in Victoria and Westmead Hospital in Sydney. These are an important part of the cancer care network.

Australia’s Cancer Centres have excellent reputations here and internationally, and the standard of cancer care in Australia is very high. Five year survival rates for the most common cancers affecting men (prostate) and women (breast) are now more than 80 per cent.

Flinders Centre for Innovation in Cancer
$10 million will be used to assist in the construction of the Flinders Centre for Innovation in Cancer.

The Centre is designed to provide innovative clinical services and research effort to aid in the control and prevention of cancer, and the treatment and care of sufferers of cancer.

It will include an integration of clinical care with research, teaching and community outreach.

The Centre will take on a national leadership role that focuses on prevention strategies, clinical and biomedical research and comprehensive and holistic patient care.

Australia is at the forefront of cancer research. Our researchers have been responsible for revolutionary breakthroughs in diverse research areas. The establishment of the Sydney Cancer Centre and the Flinders Centre for Innovation in Cancer will further strengthen our capacity in this area.

“Investment in health and medical research makes good economic and health sense. It generates health benefits, promotes longevity and increases the quality of life, as well as providing economic benefits such as the creation of new knowledge-based jobs.”

TONY ABBOTT, MINISTER FOR HEALTH AND AGEING, 9 DECEMBER 2004
Australian researchers and the Government are investing heavily in improving the health of Aboriginal Australians.
Macfarlane Burnet Institute for Medical Research and Public Health
$6 million will assist in finalising the construction of a new facility to merge the Burnet and Austin Medical Research Institutes in Melbourne.

This project will enhance Australia’s capacity to respond to the threat of infectious diseases through bioterrorism and pandemics and to assist our regional neighbours in addressing infection.

This will combine the research capacity of both organisations and strengthen their work on a number of fronts including hepatitis C, measles and avian influenza as well as continuing work into developing vaccines against cancer.

Brain and Mind Research Institute
$6 million will be used for the fitout of the new Ken Parker Brain Research Laboratories at the Brain and Mind Research Institute in Sydney.

The new research laboratories will include state-of-the-art equipment used to investigate a number of brain diseases, including cancer and blood vessel disease, which result in disability and cognitive impairments, as well as migraines and other pain-related disorders.

Menzies School of Health Research
$5.3 million will fund the expansion of the Menzies School of Health Research in Darwin.

The School is a national leader in Indigenous, remote and tropical health research and education. This funding will enable the School to expand its Indigenous health research priorities to include child health, Indigenous healing and resilience, tropical and emerging infectious diseases, metabolic and vascular health, health services research and social determinants of health.

The funding will provide additional office space and equipment to support the School’s research agenda.

We live in an age where advances in medical and biological research are accelerating rapidly and resulting in vastly improved health outcomes across all research settings – biomedical, clinical, population health and health services. Our challenges are our opportunities. The Commonwealth Government is cementing its commitment to improving prevention, treatment and cure. It is building the foundations for the future.